

Remarks

Status of the Claims

Claims 1–62 are pending in the application. All pending claims stand rejected. By this paper, claims 1, 10, 15, and 25 have been amended and claim 62 has been cancelled. For at least the reasons set forth below, Applicants submit that each of the pending claims is patentably distinct from the cited prior art and in condition for immediate allowance. Reconsideration of the claims is therefore respectfully requested.

35 U.S.C. § 101

Claims 1-30 stand rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. Applicants respectfully disagree. Claims 1-30 are directed to a **method**, which is plainly within the scope of the subject matter set forth in 35 U.S.C. § 101 ("Whoever invents or discovers any new and useful **process**," (emphasis added)). Moreover, the final results achieved by each of the claimed methods are useful, tangible, and concrete. See Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Official Gazette, page 20 (Nov. 22, 2005). More particularly, the claimed methods each result in a compressed video signal that has practical uses and benefits.

Despite Applicants' traversal of these rejections, independent claims 1, 10, 15, and 25 have each been amended to remove the "computer-implemented" language, thereby further clarifying that Applicants do not intend to claim a computer-readable medium in claims 1-30, but rather a method or process plainly within the scope of the

subject matter set forth in 35 U.S.C. § 101. In view of the foregoing, Applicants respectfully request withdrawal of the rejection of claims 1-30 under 35 U.S.C. § 101.

Claim 62 also stands rejected under 35 U.S.C. 101 due to its recitation of a "propagated signal." Applicants have cancelled claim 62. However, Applicants reserve the right to re-enter such a claim should the Patent Office change its stance on the patentability of signal claims.

35 U.S.C. § 102

Claims 1-62 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,684,714 issued to Yogeshwar et al. ("Yogeshwar"). However, as set forth below, Yogeshwar fails to disclose or suggest several key limitations of the pending independent claims.

Yogeshwar Fails to Disclose or Suggest Recompressing a Segment of a Signal In Response to a Calculated Data Rate Exceeding a Target Rate or Deviating From a Target Range.

Yogeshwar discloses a system that allows a user to manually alter the quality of one or more segments of an encoded video. More particularly, a user can review an encoded video and manually select portions of the video that have a quality which may be altered. Accordingly, some portions of the video may be deemed to have a quality which is too low, in which case the user may tag those portions to increase their quality. Likewise, other portions of the video may be deemed relatively insignificant such that their quality may be lowered in favor of other portions. The video is then re-encoded in accordance with a quantizer model that adjusts the quality of the various identified

segments in accordance with the user's selections. In other words, the bits from a segment manually marked as having a quality that is "too high" are redistributed to those marked as having a quality that is "too low" and the video is re-encoded to reflect this new distribution of quality/bits. The level of redistribution is also dependent on user input, since the system requires a user to enter numeric value for each of the identified segments corresponding with the perceived quality thereof.

Although Yogeshwar therefore discloses a system that allows for manual modification of the quality of one or more video segments, it wholly fails to disclose or suggest recompressing a video segment *in response to* a calculated data rate exceeding a target rate—as recited in independent claims 1 and 31—or in response to a calculated data rate deviating from a target range—as recited in independent claims 10, 25, 40, and 55. In fact, to the contrary, Yogeshwar only recompresses a video if and when a user manually selects one or more segments of the video for which the quality should be redistributed. See, e.g., col. 2, lines 9-19 ("A person then reviews the encoded video and **manually indicates** that the quality of specific time periods is to be altered.") (emphasis added); col. 14, lines 26-33 ("After starting the edit state in step 170, step 172 asks a user if he wishes to **manually edit** the video by changing the bit allocation of the encoded video. If the user does not desire to change the bit allocation, the process ends at step 188. **If the user desires to change the bit allocation, the user defines the video segment to be edited** in step 174. This is performed by selecting a time period of the video over which the picture quality is to be changed.") (emphasis added); see also Abstract ("A method and system in which a user **manually** changes the quality of specific time periods of encoded video.") (emphasis added).

There is no indication that Yogeshwar recompresses a video in response to anything other than manual user edits and commands, let alone in response to a calculated data rate exceeding a target rate or deviating from a target range, as required by independent claims 1, 10, 25, 40, and 55.

Yogeshwar Also Fails to Disclose or Suggest **Automatically Selecting Quality Settings to Maintain a Data Rate Within a Target Range.**

Independent claims 15, 25, 40, 45, 55, and 61 each recite, in one form or another, automatically selecting quality settings for one or more segments of a signal to maintain a data rate within a target range. This feature is not disclosed or suggested by Yogeshwar. In fact, if anything, Yogeshwar **teaches away** from this claimed feature.

As mentioned above, Yogeshwar teaches that a video may be recompressed **if and only if** a user manually selects segments of the video the respective qualities of which are desired to be redistributed. See, e.g., Abstract ("A method and system in which a user **manually** changes the quality of specific time periods of encoded video.") (emphasis added). More particularly, Yogeshwar requires a user to input numeric values for each of the video segments to be altered. See, e.g., col. 2, lines 14-46. The bits associated with the various video segments are then redistributed in accordance with the numeric values assigned to each segment. *Id.* Thus, Yogeshwar fails to disclose maintaining a data rate within a target range in the first place, let alone **automatically selecting** one or more quality settings to maintain a data rate within a target range.

In fact, the teachings of Yogeshwar on this point directly contradict those recited in the aforementioned claims. Indeed, a system that requires a user to manually select

various segments of a video and assign numerical values to each segment in order to reshuffle the quality of the segments is the very opposite of a system that ***automatically*** selects quality settings.

To further illustrate the distinctions between the claimed inventions and the teachings of Yogeshwar, Yogeshwar is focused on the redistribution of a finite number of bits among various segments of a video. In other words, increasing the quality of one segment of the video necessarily results in a decrease of the quality of another segment. The claimed invention, by stark contrast, allows for dynamically altering the quality settings of, for example, a codec to maximize quality of each of the segments of a video signal within the constraints of a target transfer rate or range during a video communication. Thus, whereas Applicants' system facilitates increasing the quality of various video segments independently of one another, the Yogeshwar system merely redistributes quality with each increase in quality being linked with a corresponding decrease in quality of another segment.

Conclusion

In view of the foregoing, all pending claims represent patentable subject matter. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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